

Patent claims

1. Method for construction of an optical beam guidance system in a contamination-free atmosphere by fitting with optical imaging elements, characterized in that
 - said imaging element is fixed at its optical axis outside of said contamination-free atmosphere of said beam guidance system, protected from atmospheric influences, in relation to a first reference of a carrier oriented to said carrier, and
 - in that said carrier together with said imaging element, protected from atmospheric influences, is brought into said contamination-free atmosphere of said beam guidance system, and, with said first reference oriented to a second reference of a receiving element, is attached to said receiving element, whereby the optical axis of said imaging element is oriented in said beam guidance system.
2. Method in accordance with claim 1, characterized in that the orientation of said optical axis of said imaging element occurs using an alignment template.
3. Method in accordance with claim 1 or 2, characterized in that cleaning/decontamination of said imaging element and said carrier is performed outside of said contamination-free atmosphere of said optical beam guidance system.
4. Universal optics module with a carrier plate (1) for receiving at least one optical imaging element (2) in a receiving plane (E-E), characterized in that said carrier plate (1) carries said

optical imaging element (2) at its optical axis oriented to one axis (X-X) with a pre-specified axial direction and said axis (X-X) has a fixed physical arrangement to a reference joined to said carrier plate (1), with which said carrier plate (1) can be positioned.

5. Optics module in accordance with claim 4, characterized in that said axis (X-X) runs perpendicular to said receiving plane (E-E) and seating surfaces (4, 5, 6) are worked into said carrier plate (1) as references that concentrically enclose said axis (X-X) in a common plane (B-B) that is parallel to said receiving plane (E-E).
6. Optics module in accordance with claim 5, characterized in that said seating surfaces (4, 5, 6) are sunk into said carrier plate (1) in a triangular formation.
7. Optics module in accordance with any of claims 4 through 6, characterized in that for aligning said optical imaging element (2), said carrier plate (1) contains at least one adjusting element (14, 15) that engages an adjustable stop (16) torsion-free on said optical imaging element (2).
8. Optics module in accordance with claim 7, characterized in that said adjustable stop (16) is attached to a lever arm (17) of a solid lever (18) that is adjustable relative to a fixed part (19) using an adjusting spindle (21) that engages said lever arm (17).
9. Optics module in accordance with claim 8, characterized in that said adjusting spindle (21) is pre-stressed and arrested by a compression spring (20) that is supported on said lever arm

(17) and on a clamping sleeve (22) that is attached in a spindle bearing (23) in said fixed part (19).

10. Optics carrier in accordance with claim 9, characterized in that said adjusting spindle (21) and a fine-pitch thread for engaging said lever arm (17) are provided with a special coating that minimizes friction.
11. Optics carrier in accordance with any of claims 4 through 10, characterized in that said optical imaging element (2) can be displaced parallel to said receiving plane (E-E) of said carrier plate (1) as required for alignment.